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Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei

264. Diptera: Lauxaniidae

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With 2 Plates

Abstract

Seventeen species of Lauxaniidae from Mongolia are listed, five of them new. A new genus, *Sciasminettia*, is proposed for *Sciasmomyia dichaetophora* Hendel (1907). The synonymy of *Homoneura septentrionalis* (Loew 1847), and *H. mellina* Czerny (1932), is established; a lectotype has been designated for the latter species. Relationships of several Palaearctic and Nearctic species are discussed.

Introduction

Czerny (1932) recorded twenty-seven species of Lauxaniidae from central and east Asia excluding Japan. The seventeen species listed here therefore represent perhaps no more than half of those likely to occur in Mongolia. Lauxaniidae prefer moist shaded habitats and are thus unlikely to be taken in numbers on the steppe. The most promising area for further investigation is no doubt the northwestern region of mountains, forests and lakes. The Asiatic lauxaniid fauna is still relatively little known and will remain so until the types of many Palaearctic species have been redescribed and the genitalia illustrated. As a contribution to this task, I have prepared drawings of some of the more useful taxonomic characters found in the species of the present collection.

My best thanks are due to Dr. Kaszab for the privilege of examining his material and for his help in furnishing data on localities and other information. To save space much of the locality data has been tabulated at the end of the paper, and under several common species only the numbers corresponding to these localities and the totals of specimens are given. For full accounts, with maps and photographs, of Dr. Kaszab's six journeys in Mongolia, 1963—1968, the reader should refer to the publications listed in the bibliography.

I am also greatly indebted to Dr. A. KALTENBACH, Natural History Museum, Vienna, and Dr. H. SCHUMANN, Zoological Museum of Humboldt University, Berlin, for furnishing information and specimens of types in their care.

Types of new species are deposited in the Hungarian Natural History Museum, Budapest. A few paratypes have been retained in the Canadian National Collection.

Lauxaniidae

Lauxania cylindricornis (Fab.)

FABRICIUS, 1794. Ent. Syst. 4: 332 (*Musca*). 1805. Syst. Antl. p. 212. BECKER, 1895. Berlin ent. Ztschr. 40: 247. CZERNY, 1932. In LINDNER, Die Fliegen der Palaearkt. Reg. 50, p. 69.

Many specimens of both sexes. Locality No. 6 (1). 113 (1). 118 (1). 124 (3). 264 (15). 273 (1). 298 (1). 311 (1). 499 (1). 514 (3). 519 (12). 523 (6). 540 (1). 547 (1). 749 (1). 762 (1). 926a (1). 934 (5). 938 (14). 939 (3). 942 (4). 961 (10). 963 (1). 967 (4). 973 (3). 978 (1).

Dissected terminalia showed no differences from those of specimens from England.

Minettia (*Frendelia*) *longipennis* (Fab.)

FABRICIUS, 1794. Ent. Syst. 4: 323 (*Musca*). BECKER, 1895 Berlin ent. Ztschr. 40: 213 (*Sapromyza*). CZERNY, 1932. In LINDNER, Die Fliegen der Palaearkt. Reg. 50, p. 25.

HENNIG, 1948. Acta Zool. Lilloana 6: 409, figs.

COLLIN, 1948. Trans. R. ent. Soc. London 99: 228.

1 ♀, Bulgan Province, Namnan ul mountains, 23 km. NW. of Chutag, 1150 m., 21. VII. 1968, No. 1135.

Sciasminettia **new genus**

Head in profile subtriangular; lower margin horizontal, produced well beyond eye; vertex subcarinate; frons and face sloping forward in same plane to oral margin. Frons much broader than long. Face slightly convex; parafacial greatly narrowed below. Gena with slight tumescence below eye, with two strong bristles near vibrissal angle. Clypeus widened laterally. Antennae short, widely separated at base. Palpus compressed, fusiform.

Thorax robust; prosternum broad, bare; scutellum somewhat bulbous, with two large, highly-polished, black, apical spots. Wing venation normal; veins bare; costal spinules ending midway between R_{2+3} and R_5. Fore femur without ctenidium. Mid-tibia with 1 spur. Preapical bristles of fore and hind tibiae exceptionally long and slender.

Abdomen short. Female genital sternite simple.

Chaetotaxy. 2 *fro*, 1 *oc*, 2 *vt*, 1 *pvt*, 1+3 *dc*, 1+4 *acr* (incl. *prsc*), 1 *hum*, 1 *prs*, 2 *ia*, 1 *sa*, 2 *pa*, 4 *sc*, 2 *ntpl*, 1 *ppl*, 1 *mpl*, 2 *stpl*.

Type species: *Sciasmomyia dichaetophora* Hendel (Amur).

Differs from *Sciasmomyia* Hendel (to which it is closely related) by the presence of two strong bristles near the vibrissal angle and of two strong intraalar bristles in line behind the suture. The head is flatter in front, the frontofacial angle being entirely absent, and the face more shining. Fore femur without ventral ctenidium

and hind tibia without a strong curved spur, both being present in *Sciasmomyia*. These two genera, together with *Drepanephora* Loew and *Afrolauxania* Curran form a monophyletic group on a combination of characters not shared by any other genera known to me, namely broad sloping frons, bases of antennae widely separated, four or more pairs of strong *acr* bristles, long slender fore and hind tibial bristles, curved ventral spurs on hind tibia (exc. *Sciasminettia*), scutellum with swollen or slightly bilobate apex with large black spots on the swellings. Body in general mottled with dark spots (exc.*Afrolauxania*). *Xangelina* Walk. may also belong to this group.

Sciasminettia dichaetophora (Hend.) **n. comb.**

Hendel, 1907. Wien ent. Ztg. 26: 235 (*Sciasmomyia*).

Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 39., fig. 28, and Pl. I., fig. 7. (*Sciasmomyia*).

1 ♀, Central Province, Ulan-Baator, Nudit Valley of Bogdo ul mountains, 1650 m., 3. VI. 1967, No. 762.

Sapromyza amabilis Frey

Frey, 1930. Notul. ent. 10: 89. Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 49.

1 ♂, 1 ♀, Central Province, Tosgoni ovoo, 10 km. N. of Ulan-Baator, 1700—1900 m., 23.—24. VII. 1967, No. 926a. 1 ♂ Bulgan Province, Namnan ul mountains, 23 km. NW. of Chutag, 1150 m., 17. VI.—21. VII. 1968, No. 976.

Through the kindness of Dr. Walter Hackman, Helsinki, I have received several specimens of *amabilis* from Lapland. The Mongolian specimens are certainly the same. The species may also occur in North America. Many specimens from tree-line localities from Alaska to Labrador are hardly different on genitalic and other characters. There are specimens in the U. S. National Museum, from the mouth of the Mackenzie River, identified as *amabilis* by J. R. Malloch.

Sapromyza atripes (Mg.)

Meigen, 1838. Syst. Beschr. 7: 352 (*Lauxania*). Becker, 1895. Berlin ent. Ztschr. 40: 248 (*Lauxania*). 1902. Z. Syst. Hym. Dipt. 2: 232 (*Lauxania*). Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 50.

Many specimens of both sexes: Locality numbers 106 (1). 118 (1). 486 (2). 493 (1). 494 (5). 499 (4). 507 (1). 513 (11). 517a (1). 519 (1). 523 (1). 538 (1). 732 (1). 754 (2). 762 (4). 934 (20). 938 (17). 939 (18). 942 (3). 944 (14). 961 (3). 963 (5). 967 (2). 969 (1). 973 (4). 975 (1). 1056 (1). 1136 (1).

Becker (1902) in his study of Meigen's types in Paris and Vienna reported that the type of *atripes* was apparently lost. Previously (1895) he had recognized the species from two Siberian specimens in the Loew Collection (though he reported them erroneously as from Galicia), and in this he was followed by Czerny (1932). The original description of *atripes* gives the impression that it is very similar to *Lauxania hyalinata* Mg., the main differences being as follows: Colour olive-green rather than bluish-black; legs entirely black; third antennal segment blackish-brown with bare rather than pilose arista; length 1—1/4 lines (against 1 line in *hyalinata*).

The Mongolian material agrees reasonably well with MEIGEN's description and the identification can hardly be questioned although no authentic European records have apparently been published since MEIGEN's time. On average it is slightly larger than *hyalinata*; thoracic pollen brassy rather than white so that the reflected colour is greenish; posterior four tibiae almost totally black instead of, as in *hyalinata*, having the extremities noticeably paler; third antennal segment not conspicuously reddish beneath, arista micropubescent (about the same as in *hyalinata*).

In contrast to these rather superficial differences, the genitalia in both sexes (Figs. 2, 7) are very distinctive. The female eighth and ninth segments in *atripes* are short, the former bearing on each side a slender hooked process that often protrudes in dried specimens, whereas in *hyalinata* these segments are very long and produced backwards to form the components of an egg guide. In *atripes* male, the surstylus is broadly triangulate and attached by one corner to the epandrium, the ventral arm of the triangle curving beneath the aedeagus to a bifurcate tip bearing a few small hairs.

Sapromyza atrivena **n. sp.**

Very similar to *S. atripes*. Entirely black, wing hyaline with black veins. Length 3.0 mm.

Head black. Frons half width of head, somewhat wider than long, sides parallel; in profile gently sloping, viewed anteriorly brown-pollinose with very narrow polished brown anterior margin, from above dull black with subshining triangle and orbital plates. Face grey-pollinose; clypeus polished brown laterally; parafacials pale brown-pollinose. Gena thickly grey-pollinose, about one third height of eye. Antenna black; third segment short-oval, arista micropubescent. Palpus and mouthparts black.

Thorax black, subshining, thinly grey-pollinose, but pollen brassy on mid-line between *acr* rows, outside line of *dcs*, and on scutellum. Wing hyaline; veins black; stigma pale brownish. Calyptere pale brownish, fringe pale. Haltere whitish. Legs totally black including knees and all tarsi.

Abdomen subshining black, grey-pollinose. Hypopygium as in Fig. 8.

Chaetotaxy. *Oc* moderately strong, about equal to lower *fro* and shorter than *ovt*; 0+3 *dc*, decreasing anteriorly to just behind suture; *acr* short, sparse, in two rows, failing posteriorly; *prsc* fine; anterior *stpl* half length of posterior.

Holotype. ♂, Ulan-Baator, Nucht Valley, Bogdo ul mts., 1750 m., 10. VI. 1966, No. 513. (Genitalia preserved in glycerin in microvial).

Differs from *S. atripes* in being somewhat smaller with entirely black tarsi, black wing veins, a shorter more rounded third antennal segment and different hypopygium. Female unknown.

Sapromyza hyalinata (Mg.)

MEIGEN, 1826. Syst. Beschr. 5: 300 (*Lauxania*). BECKER, 1895. Berlin ent. Ztschr. 40: 250 (*Lauxania*). 1902. Z. Syst. Hym. Dipt. 2: 232. CZERNY, 1932. In LINDNER, Die Fliegen der Palaearkt. Reg. 50, p. 53. COLLIN, 1948. Trans. R. ent. Soc. London. 99: 235.

1 ♂, Central Province, Ulan-Baator, left bank of Tola R., 1300—1400 m., 11. VI. 1964, No. 117. 1 ♀, Chentej Province, between Zenchermandal and Žargaltchaan,

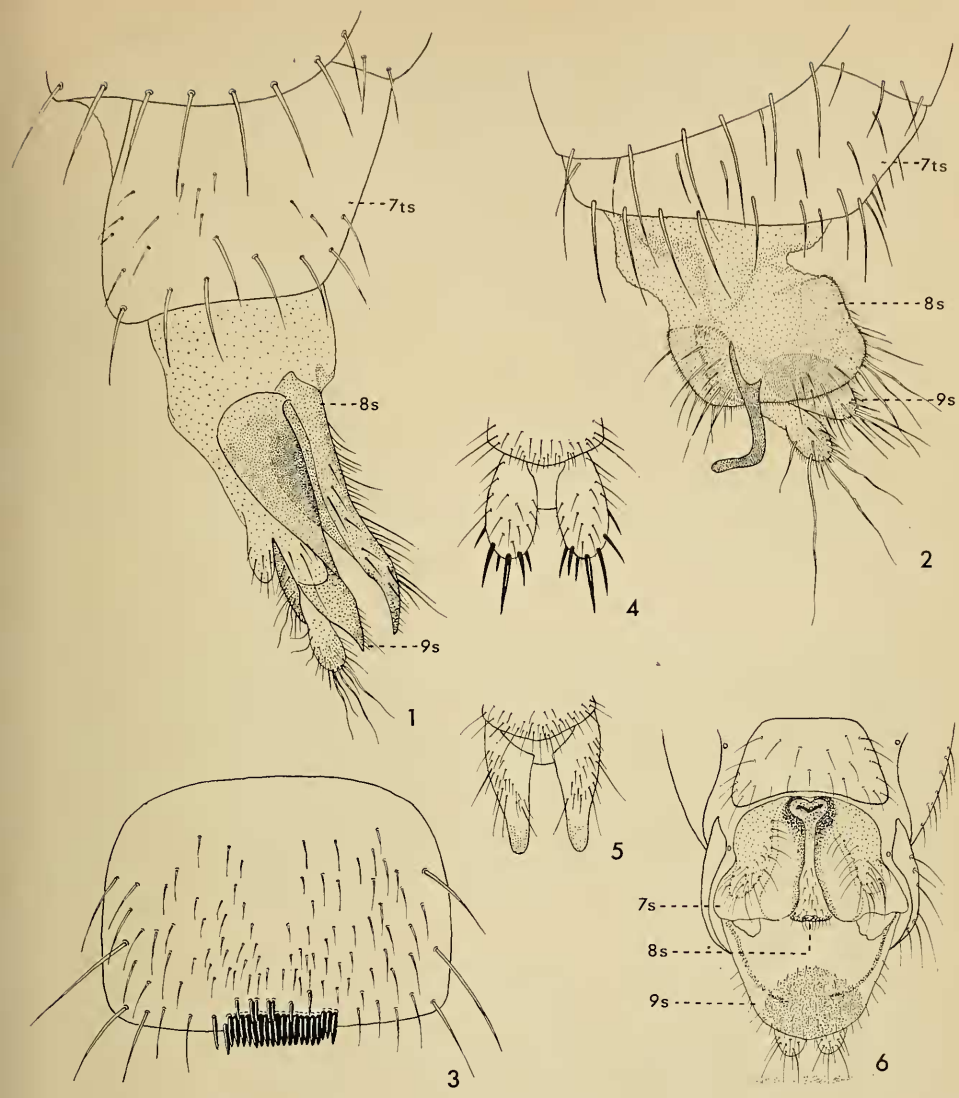

Plate I

1. *Sapromyza hyalinata* (Mg.). ♀ terminalia, lateral. (England). 2. *S. atripes* (Mg.). ♀ terminalia, lateral. (Ulan-Baator). 3. *Homoneura septentrionalis* (Lw.). ♂ fifth abdominal sternite. (Suchebaator). 4. *H. septentrionalis* (Lw.). ♀ anal, cerci, dorsal. (Suchebaator). 5. *H. modesta* (Lw.). ♀ anal cerci, dorsal. (Tomsk). 6. *Sapromyza pseudovirilis* n. sp. ♀ terminalia, ventral.

(7ts — seventh tergosternite. 7s, 8s, 9s — seventh, eighth, and ninth sternites).

1400 m., 22. VIII. 1965, No. 467. 1 ♀, Bulgan Prov., Namnan ul Mountains, 23 km. NW. of Chutag, 1150 m., 17. VI. 1968, No. 973. 1 ♂, same loc. and date, No. 975. 1 ♂, same loc., 21. VII. 1968, No. 1136.

Dissected terminalia (Fig. 1) show no differences from European specimens. Czerny records *hyalinata* from Europe and North America. The Nearctic form that

has gone under this name for many years is, however, a complex of several species, none of them identical with *hyalinata*. The common northern Nearctic species should be known as *Sapromyza nigrans* (Melander 1913). A study of the others is now in preparation. See also notes under *atripes* above.

Sapromyza opaca Beck.

Becker, 1895. Berlin ent. Ztschr. 40: 207. Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 59. Collin, 1948. Trans. R. ent. Soc. London. 99: 233.

1 ♂, 1 ♀, Central Prov., 126 km. N. of Ulan-Baator, roadside, 1100 m., 7. VII. 1964, No 278. 1 ♂, Central Prov., Ulan-Baator, Nucht valley, Bogdo ul Mts., 1600 m., 22. VII.—27. VIII. 1965, No. 297a. 1 ♀, Central Prov., Tosgoni ovoo, 10 km. N. of Ulan-Baator, 1700—1900 m., 23.—24. VII. 1967, No. 926a. 1 ♂, Central Prov., Ulan-Baator, Nucht valley, Bogdo ul Mts., 1500—1600 m., 21. VII. 1967, No. 931.

The distinctive aedeagus, as described by Collin (1948), makes this a rather readily recognized species.

Sapromyza pseudovirilis **n. sp.**

Black; dull grey- or aeneous-pollinose. Wing hyaline, veins dark brown. Three post-sutural *dc*. Pregenital sternite of female strongly bilobate. Length 3.5 mm.

Female: Head black, thickly grey-pollinose; frons, vertex, and upper margin of occiput aeneous. Frons half as wide as head, slightly wider than long, sides parallel, narrow anterior margin reddish, in profile gently sloping; frontal plates not well defined. Face flat, slightly retreating; parafacial at middle about one third to two fifths facial width. Gena more than one third height of eye. Antenna dark brown; third segment oval, less than twice as long as wide, reddish below; arista micropubescent. Palpus black.

Thorax dull grey-pollinose; dorsum including scutellum aeneous. Wing hyaline; veins dark brown; stigma pale yellowish. Haltere and calyptere pale brownish-yellow, fringe of latter pale. Legs black, grey-pollinose; knees, apical third or more of tibiae, anterior metatarsus, and all of other tarsi reddish.

Abdomen dull grey-pollinose. Seventh sternite larger than sixth, expanding in two fleshy lobes that are narrowly and deeply separated along mid-ventral line, thus superficially resembling the fifth sternite lobes of many male Calyptratae. Within the cleft between the lobes and fused to them lies the narrow eighth sternite. Ninth sternite broadly rounded posteriorly, microscopically rugose (Fig. 6).

Chaetotaxy normal. *Oc*, *ovt*, and *prsc* about equal in size; *dc* 0+3 decreasing in size anteriorly; *acr* hairs in four rows, outer ones very sparse.

Holotype. ♀, Central Province, Tosgoni ovoo, 6—10 km. N. of Ulan-Baator, 1700 m., 4. VI. 1968, No. 934. Paratypes. 3 ♀♀, same data as holotype. 1 ♀, Central Province, 11 km. ESE. of Bajanzogt, 1600 m., 13. VI. 1968, No. 944.

The material of this species is not in best condition, several specimens, apparently mounted from fluid, having all dorsal bristles and pollen rubbed off. The closest relative of *pseudovirilis* is the Nearctic species *Sapromyza brachysoma* Coquillett 1898, the general appearance and especially the genitalia of both being very similar.

Sapromyza simplex Loew

Loew, 1847. Dipt. Beitr. 3: 35. Becker, 1895. Berlin ent. Ztschr. 40: 230. Czerny. 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 62.

1 ♂, Uvs Province, River Changilcagijn, 6 km. S. of Baruunturuun, 1350 m., 24. VI. 1968, No. 1011. 1 ♂, Chövsgöl Province, 3 km. SW. of Burenchaan, 1650 m., 16. VII. 1968, No. 1113.

S. simplex is closely related to the Nearctic species *Sapromyza cyclops* Melander (1913), differing chiefly in having the posterior margin of mesonotum bare behind the prescutellar *acr* and posterior *dc* bristles, whereas in *cyclops* this area has rather numerous long bristly hairs.

Lyciella quadrivittata (Loew)

Loew, 1861. Wien ent. Monatschr. 5: 350 (*Sapromyza*). Becker, 1895. Berlin ent. Ztschr. 40: 224 (*Sapromyza*). Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 45. (*Lycia*). Collin, 1948. Trans. R. ent. Soc. London 99: 237.

2 ♀♀, Central Province, Tosgoni ovoo, 6—10 km. N. of Ulan-Baator, 1700 m., 4. VI. 1968, No. 934, and 7.—8. VI. 1968, No. 938.

The closest relatives of *quadrivittata* are found in the Nearctic Region where they form a group of about 20 species all having the same general colour pattern of glaucous thorax and yellowish, usually spotted, abdomen and legs; head and thorax with conspicuous dark brown vittae. A few have a well-developed anteroventral ctenidium on the fore femur, a character normally found only in species of *Homoneura* Wulp. and related genera.

L. quadrivittata is distinctive in having the costal spinules hardly extending beyond R_{2+3}. The ctenidium is weakly developed, consisting of 4 or 5 widely-spaced spines as in *Lyciella rorida* (Fall.).

Homoneura kaszabi **n. sp.**

Brownish-yellow. Costal border of wing broadly infumated, costal spinules ending between R_{2+3} and R_5. Length 3.0 mm.

Frons dull, as long as wide, about half width of head, sides parallel; *fro* evenly spaced, set in very narrow shining plates. Parafacial about one third width of face at middle. Gena one fifth to one quarter height of eye. Occiput with dark cervical patch dusted with niveous pollen. Third antennal segment oval, less than twice as long as wide; arista conspicuously pubescent.

Mesonotum subshining; wing faintly smoky, not yellowish; veins brown; costal border infumated, including marginal and most of submarginal cells; penultimate section of M_{1+2} more than half length of ultimate; costal spinules ending about midway between R_{2+3} and R_5; calyptere including fringe, and haltere yellowish. Ctenidium well-developed. Mid-tibia with two unequal spurs. Hind femur with strong *ad* and weaker *av* preapical bristles, in male with several long fine *pv* hairs near base.

Abdomen normal. Hypopygium as in Fig. 9. Genital sternite of female simple.

Chaetotaxy. *Oc* long, equal to *ovt* and slightly longer than *pvt*; *dc* 0+3, decreasing anteriorly, beginning well behind suture; *prsc* well developed; *acr* short, in six irregular rows;

Holotype. ♂. Central Province, Tosgoni ovoo, 10 km. N. of Ulan-Baator, 1700—1900 m., 23.—24. VII. 1967, No. 926a (Abdomen preserved in glycerin in microvial). Allotype, Central Province, SE. of Bajancogt, 1600 m., 4. VII. 1964, No. 264. Paratypes, ♀, Central Province, 12 km. S. of Ulan-Baator, Nucht valley, Bogdo ul Mts., 1500 m., 6. VII. 1964, No. 273. 2 ♀♀, Chövsgöl Province, 6 km. WNW. of Tosoncengel, 1480 m., 18. VI. 1968, No. 978. ♀, Chövsgöl Province, between Tosoncengel and Ich-ul, 22 km. E. of Tosoncengel, 1150 m., 21. VII. 1968, No. 1133.

It is a pleasure to name this species for Dr. Zoltan Kaszab.

Homoneura lamellata (Beck.)

Becker, 1895. Berlin ent. Ztschr. 40: 204 (*Sapromyza*). Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 15, fig. 14.

2 ♀♀, Central Province, Tosgoni ovoo, 5—10 km. N. of Ulan-Baator, 1500—1900 m., 19.—24. VII. 1967, Nos. 926, 926a.

Described from Russian material in the Schnabl collection, Czerny also records it from upper Austria. A Holarctic species, it occurs widely in Canada and northeastern U.S.A. It appears to be commoner in the prairies and has been taken in numbers in thickets of Aspen (*Populus*) in southern Saskatchewan. Readily recognized in the ♂ by the two large heavily-spined lamellae arising on the ventral borders of the fifth tergite. Not uncommonly vein R_5 has three rather than the usual two spots between *rm* and apex, and this is the condition on one wing of one of the present specimens.

Homoneura minor (Beck.)?

Becker, 1895, Berlin ent. Ztschr. 40: 236 (*Sapromyza*).

Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 17, fig. 16.

Fifteen specimens, both sexes, in poor condition. Locality numbers 304 (5), 531 (7), 735 (1), 915 (1), 959 (1).

Specimens in the Canadian National Collection from Berlin identified as *minor* (Fig. 13) differ from Becker's description in being larger, length of wing 4.0 mm., and in having all wing veins pale, ultimate section of M_{1+2} only 1.5 times penultimate. They are not the same as the Mongolian specimens (Fig. 12) which are closer to the description in having the wing length 3.0 mm. and, at least in males, crossvein *M* darkened and ultimate section of M_{1+2} nearly twice penultimate.

The type locality of *minor* is in doubt. Becker thought it was probably Galicia as the specimens were among other material of the Loew Collection from this locality. However, it appears that he was mistaken about the Galicia material in the case of *Sapromyza atripes* Mg. (see above) so that there is at least a possibility that the material of *minor* came from Siberia.

Homoneura patella **n. sp.**

Dull brownish-yellow. Head, scutellum, and legs paler. Face swollen below. Wing unmarked; costal spinules ending just before R_5. Length 2.75—3.00 mm.

Head pale orange-yellow, less than two thirds as long as high, ventral margin rounded in profile. Frons dull, half head width, sloping, rounded into facial plane,

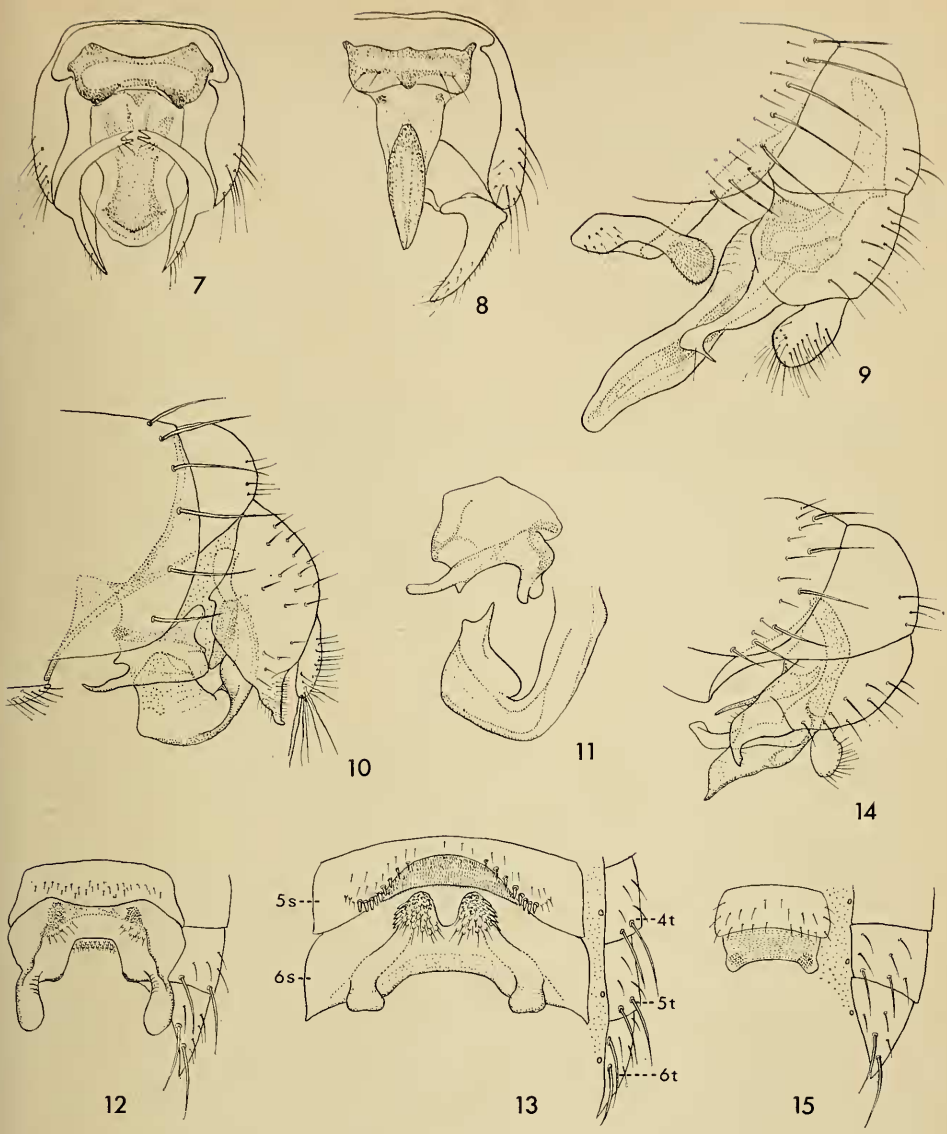

Plate II

7. *Sapromyza atripes* (Mg.). ♂ hypopygium, ventral. (Ulan-Baator). 8. *S. atrivena* n. sp. ♂ hypopygium, ventral (rt side omitted). 9. *Homoneura kaszabi* n. sp. ♂ hypopygium, lateral. 10. *H. patella* n. sp. ♂ hypopygium, lateral. 11. *H. patelliformis* (Beck.). ♂ hypandrium (above) and aedeagus, lateral. (Tirol). 12. *H. minor* Beck.? ♂ apex of abdomen, ventral, (Hypopygium and rt side of tergites omitted). (Mongolia). 13. *H. minor* Beck.? The same (Berlin). 14. *H. spinidorsum* n. sp. ♂ hypopygium, lateral. 15. *H. spinidorsum* n. sp. ♂ apex of abdomen, ventral (the same parts omitted). (5s, 6s — fifth and sixth sternites. 4t, 5t, 6t — fourth, fifth, and sixth tergites).

sides parallel; frontal plates narrow, shining. Face above carinate with lateral grooves, below broadly convex, in profile bulging; clypeus and prelabrum not prominent; parafacial at its middle one third width of face. Gena almost two fifths

height of eye. Antenna yellow, third segment short-oval with noticeable pale pubescence; arista short plumose. Palpus and proboscis yellow.

Thorax subshining brownish-yellow, scutellum paler. Wing membrane faintly yellow-tinged; veins pale; costal spinules weaker towards R_5 and ending just short of it. Calyptere pale yellow including fringe. Haltere pale yellowish. Fore femur with weak ctenidium of eight well-spaced spinules. Anterior bristles on mid-femur weak. Mid-tibia with two spurs.

Abdomen pale brownish-yellow. Hypopygium as in Fig. 10. Cercus flattened ovate with marginal fringe of eight long hairs spreading fan-wise.

Chaetotaxy. Anterior *fro* slightly shorter than posterior, equal to *ovt*, *oc* equal to *pvt*, about half length of posterior *fro*; dc 0+3, anterior one just behind suture; *acr* in 6 rows, outer ones incomplete.

Holotype. ♂, Chövsgöl Province, 8 km. N. of Burenchaan on Delger River., 1450 m., 20. VI. 1968. No. 990. (Abdomen preserved in glycerin in microvial.)

Closely related to *Homoneura patelliformis* (Beck.), four specimens of which in C. N. C. from Eyrs, Tirol have a similar short head with sloping frons, bulging face, and rounded lower margin. The gena in *patelliformis* is, however, narrower. The costal spinules are somewhat variable; in some specimens ending clearly short of R_5, in others almost attaining it. The basic structure of the hypopygium is the same in both species, but there are appreciable differences in detail (Fig. 11).

Homoneura septentrionalis (Loew)

Loew, 1847. Dipt. Beitr. 3: 32 (*Sapromyza*). Becker, 1895, Berlin ent. Ztschr. 40: 197, 198. (*Sapromyza*). Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 19. *Homoneura mellina* Czerny, 1932. In Lindner, Die Fliegen der Palaearkt. Reg. 50, p. 17. **New Synonymy.**

Many specimens of both sexes: Locality numbers 329 (1). 338 (12). 356 (3). 370 (11). 411 (2). 727 (193). 735 (1). 1133 (3). 1145 (2). 1148 (1).

One of the most abundant species in the collections. The male has a conspicuous comb of about twenty short stout spines at the middle of posterior margin of fifth sternite, nearly always visible without dissection (Fig. 3). The unsclerotized anal cercus of the female has three or four short black spinous bristles at apex (Fig. 4). The male of the closely-related species *Homoneura modesta* (Loew) (? = *H. rectangulata* Czerny) lacks a comb on the fifth sternite, and the elongate cercus of the female is sclerotized and bears only weak hairs (Fig. 5).

The synonymy of *H. mellina* Cz. has been established through the cooperation of Dr. H. Schumann, Zoological Museum, Humboldt University, Berlin, who examined the type female of *septentrionalis* Lw., and Dr. A. Kaltenbach, Natural History Museum, Vienna, who sent the type series of *mellina* for study. From this series I have selected and labelled as lectotype a male bearing labels as follows: 1. „Transbaik., Pjestschanka b. Tsichta, H. Frieb 9. VIII. '16." 2. „*Homoneura mellina* Czerny det. Czerny."

Homoneura spinidorsum n. sp.

Yellow. Mesonotal hairs somewhat bristly. Wing unmarked; costal spinules ending before apex of R_5. Length of wing 2.0 mm.

Frons half width of head, dull orange-yellow; narrow orbital plates whitish-yellow, subshining; ocellar tubercle slightly darkened. Face flat, slightly retreating, pale yellow, subshining; parafacial orange-yellow becoming paler below and on orbit, about one third width of face, scarcely narrowed below. Gena one fourth height of eye. Cervical area dark, overlaid with niveous pollen. Third antennal segment short oval; arista dark, short pubescent. Palpus yellow.

Thorax yellow, subshining, thinly pollinose. Mesonotal hairs, including four *acr rows*, somewhat short, stout, and bristly. Wing membrane pale yellow-tinged; veins pale; costal spinules ending little more than midway between R_{2+3} and R_5. Last section of M_{1+2} twice as long as penultimate. Calyptere and haltere pale yellow. Ctenidium weak. Mid-femur with 2—3 strong *ant* bristles on apical half. Mid-tibia with 2 spurs. Preapical *ad* on hind femur weak.

Hypopygium as in Fig. 14; aedeagus short, tapering, with two conspicuous, curved, blunt-tipped gonapophyses. Sixth sternite slightly smaller than fifth, without processes but with posterolateral angles slightly pigmented (Fig. 15).

Chaetotaxy: *fro* equal, upper slightly closer to *ivt* than to lower; *oc* moderate, equal to *pvt*, slightly shorter than *ovt*; 0+3 *dc* decreasing anteriorly, first slightly behind suture (most bristles of the head and dorsum of thorax are missing, their size being judged from the scars).

Holotype. ♂, Bulgan Province, about 20 km. W. of Bajannuur, 1100 m., 18. VI. 1966, No. 531. (Abdomen preserved in glycerin in microvial).

Table 1. List of Localities

Coll. No.	Province	Locality	Alt. (m.)	Date
6	Central	Ulan-Baator, Zaisan valley, Bogdo ul mts.	1420—1500	18. VI. 63
106	„	Boro river, 20 km. E. of Zuun-Chara	1400	9. VII. 63
113	„	Songino, 24 km. SW. of Ulan-Baator	1300	13. VII. 63
118	„	12 km. SE. of Ulan-Baator, Nucht valley, Bogdo ul mts.	1500	12. VI. 64
124	„	Ulan-Baator, Zaisan valley, Bogdo ul mts.	1450—1500	13. VI. 64
264	„	SE. of Bajancogt	1600	4. VII. 64
273	„	12 km. SE. of Ulan-Baator, Nucht valley, Bogdo ul mts.	1500	6. VII. 64
298	„	Ulan-Baator, Nucht valley, Bogdo ul mts.	1500—1800	22.—23. VII. 65
304	„	Kerulen river, 45 km. E. of Bajandelger	1400	26. VII. 65
311	Chentej	Between Zenchermandal and Žargaltchaan	1400	27.—28. VII. 65
329	„	60 km. ENE of Öndorchaan, at Kerulen river	950	30. VII. 65
338	„	Tumunzogt, 160 km. ENE. of Öndörchaan	1000	31. VII. 65
356	Suchebaator	Ongon sand, 10 km. S. of Chongor	900	3.—4. VIII. 65
370	„	Molzog sand, 2 km. S. of Dariganga	1150	6. VIII. 65
411	Čojbalsan	Chalchingol	600	14. VIII. 65
486	Central	Ulan-Baator, Nucht valley, Bogdo ul mts.	1600	27. VIII. 65
493	„	Ulan-Baator, Nucht valley, Bogdo ul mts.	1880	9. VI. 1966
494	„	Ulan-Baator, Nucht valley, Bogdo ul mts.	1650—1950	4. VI. 1966
499	„	Ulan-Baator, Zaisan valley, Bogdo ul mts.	1600	6. VI. 66
507	„	Ulan-Baator, Nucht valley, Bogdo ul mts.	1880	9. VI. 66
513	„	Ulan-Baator, Nucht valley, Bogdo ul mts.	1750	10. VI. 66
514	„	Ulan-Baator, Nucht valley, Bogdo ul mts.	1600—1750	10. VI. 66
517a	„	SE. of Bajanzogt	1600	11. VI. 66
519	„	SE. of Bajanzogt	1600	11. VI. 66
523	„	About 30 km. E. of Nalajch	1530	14. VI. 66

Coll. No.	Province	Locality	Alt. (m.)	Date
531	Bulgan	About 20 km. W. of Bajannuur (L. Bajan)	1100	18. VI. 66
538	Archangaj	Changaj mts,. 8 km. W. of Urdtamir	1620	19. VI. 66
540	„	Changaj mts,. 8 km. W. of Urdtamir	1620	19. VI. 66
547	„	Changaj mts., 20 km. W. of Ichtamir	2150	20. VI. 66
727	„	Chaalgsin chundi, 63 km. E. of Urdtamir	1500	22. VII. 66
732	Bulgan	9 km. E. of Abzaga	1300	23. VII. 66
735	„	4 km. S. of Daschinčilen	1200	23. VII. 66
749	Central	SE. of Bajanzogt	1600	27. VII. 66
754	„	Bogdo ul mts. Bugijn až achuj	1650	31. V. 67
762	„	Ulan-Baator, Nucht valley, Bogdo ul mts.	1650	3. VI. 67
915	Mittelgobi	20 km. S. of Delgerzogt	1480	13.—14. VII. 67
926a	Central	Tosgoni ovoo, 10 km. N. of Ulan-Baator	1700—1900	23.—24. VII. 67
934	„	Tosgoni ovoo, 6—10 km. N. of Ulan-Baator	1700	4. VI. 68
938	„	Tosgoni ovoo, 6—10 km. N. of Ulan-Baator	1700	7.—8. VI. 68
939	„	Bugijn až achuj, Bogdo ul mts. 36 km. SW. of Ulan-Baator	1650	10. VI. 68
942	„	Ulan-Baator, 5 km. S. of Zentrum, Zaisan val., Bogdo ul mts.	1600	11. VI. 68
944	„	11 km. ESE. of Bajanzogt	1600	13. VI. 68
959	Bulgan	30 km. NNW. of Daschinčilen	1200	15. VI. 68
961	„	23 km. NNE. of Chischig-Öndör	1390	15. VI. 68
963	„	23 km. NNE. of Chischig-Öndör	1390	15. VI. 68
967	„	7 km. NW. of Chanžargalant	1350	16. VI. 68
969	„	7 km. NW. of Chanžargalant	1350	16. VI. 68
973	„	Namnan ul mts. 23 km. NW. of Chutag	1150	17. VI. 68
975	„	Namnan ul mts. 23 km. NW. of Chutag	1150	17. VI. 68
978	Chovsgol	6 km. WNW. of Tosoncengel	1480	18. VI. 68
1056	Bajan-Olgij	Valley of Chavcalyn River, 25 km. E. of Cagaannuur	1850	3. VII. 68
1133	Chovsgol	22 km. E. of Tosoncengel	1150	21. VII. 68
1136	Bulgan	Namnan ul mts. 23 km. NW. of Chutag	1150	21. VII. 68
1145	„	S. shore of L. Bajan, 11 km. W. of Bajannuur	1000	24. VII. 68
1148	Central	25 km. E. of Lun	1200	25. VII. 68

References

Becker, T. (1895): Dipterologische Studien II. Sapromyzidie. — Berlin ent. Ztschr. 40: 171—264. 1 pl.

Becker, T. (1902): Die Meigen'schen Typen der sogen. Muscidae acalypterae (Muscaria holometopa) in Paris und Wien. — Z. syst. Hym. Dipt. 2: 209—256.

Collin, J. E. (1948): A short synopsis of the British Sapromyzidae (Diptera). — Trans. R. ent. Soc. London 99: 225—242. 3 figs.

Coquillett, D. W. (1898): New species of Sapromyzidae. — Canad. Ent. 30: 277—280.

Czerny, L. (1932): In Lindner, Die Fliegen der Palaearktischen Region: 50. Lauxaniidae (Sapromyzidae). 76 pp., 1 pl.

Kaszab, Z. (1963—1968): Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei.
2. Liste der Fundorte. — Folia ent. hung. 16: 285—307. 1963.
25. Liste der Fundorte der II. Expedition. — Ibid. 18: 5—38, 1965.
66. Liste der Fundorte der III. Exped. — Ibid. 18: 587—623. 1965.
114. Reisebericht der IV. Expedition. — Ann. hist. -nat. Mus. natl. hung. (zool.) 59: 191—210. 1967.
166. Reisebericht der V. Exped. — Ibid. 60: 109—129. 1968.
186. Liste der Fundorte der VI. Exped. — Folia ent. hung. 21 (Suppl.): 389—444. 1968.

Melander, A. L. (1913): A synopsis of the Sapromyzidae. — Psyche 20: 57—82 1 pl.

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